

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 September 2003 (18.09.2003)

PCT

(10) International Publication Number
WO 03/075989 A3

(51) International Patent Classification⁷: **A61M 16/00**,
H02P 7/63

(21) International Application Number: **PCT/IB03/01392**

(22) International Filing Date: **10 March 2003 (10.03.2003)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:
60/362,441 **8 March 2002 (08.03.2002)** **US**

(71) Applicant (*for all designated States except US*): **KAERY S.A.** [FR/FR]; 50, Boulevard Stalingrad, F-06300 Nice (FR).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **DELACHE, Alain** [FR/FR]; 15, avenue de la Rosaie, F-06300 Nice (FR).
DELACHE, Véronique [FR/FR]; 15, avenue de la Rosaie, F-06300 Nice (FR).

(74) Agent: **BONNEAU, Gérard**; Cabinet Bonneau, Les Taissonnières HB3, 1681, route des Dolines, F-06560 Sophia Antipolis (FR).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

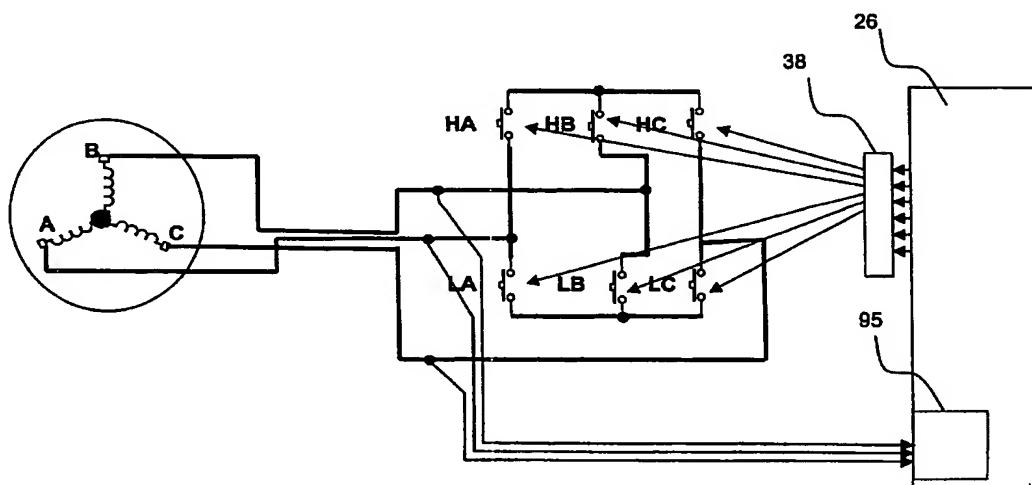
Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
13 November 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **AN AIR ASSISTANCE APPARATUS PROVIDING FAST RISE AND FALL OF PRESSURE WITHIN ONE PATIENT'S BREATH**



(57) Abstract: The invention concerns an apparatus delivering air to this patient through a mask, comprising an air blower (33) wherein the impeller (5) is rotated by an electro motor comprising a rotor (3) and a stator (8), said stator having at least three sectors (8a, 8b and 8c), the rotation of the rotor being enabled by changes of the polarity of the sectors, each sectors polarity configuration constituting one step of the rotor's rotation, said apparatus comprising a driving unit (36) changing the sectors polarity when the rotor is at his optimal position, so that the efficiency of the electro motor enables the blower to have fast accelerations and I decelerations within one patient's breath step, said breath step consisting of one inspiration and one expiration.

INTERNATIONAL SEARCH REPORT

Internat^l Search No
PCT/IB 03/01392

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61M16/00 H02P7/63

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61M H02P G05B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 02 26305 A (MALLINCKRODT INC) 4 April 2002 (2002-04-04) page 9, line 18 - page 14, line 7 page 16, line 19 - line 27 page 30, line 6 - line 15 page 31, line 6 - line 24	1, 9, 11, 12, 15, 17, 20, 23
X	US 2002/000228 A1 (SCHOEB RETO) 3 January 2002 (2002-01-03) paragraph '0026! paragraph '0028! paragraph '0032! paragraph '0038! paragraph '0040! paragraph '0043!	1, 11, 12, 15, 17, 20, 23
Y	---	2
	--- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *G* document member of the same patent family

Date of the actual completion of the international search

12 August 2003

Date of mailing of the international search report

05/09/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5618 Patentlaan 2
NL - 2280 HV Rijswijk
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Storer, J

INTERNATIONAL SEARCH REPORT

International Search No.
PCT/IB 03/01392

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 977 737 A (LABRIOLA II DONALD P) 2 November 1999 (1999-11-02) claims 1,2,6 -----	2

INTERNATIONAL SEARCH REPORT

International Search Report No
PCT/IB 03/01392

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0226305	A	04-04-2002	CA	2423244 A1		04-04-2002
			EP	1322369 A2		02-07-2003
			WO	0226305 A2		04-04-2002
US 2002000228	A1	03-01-2002	EP	1170025 A1		09-01-2002
US 5977737	A	02-11-1999	NONE			